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ANTHONY ENGLAND
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EXAMINER

KENDALL, CHUCK O

ART UNIT	PAPER NUMBER
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2122

DATE MAILED: 03/10/2004

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/783,250

Applicant(s)

PAL ET AL.

Examiner

Chuck O Kendall

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the application filed 12/26/03.
2. Claims 1 – 45 have been examined.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 6, 9 – 15, 17 – 23, 25 – 36 & 38 – 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rodrigues et al. USPN 6,067,639 (hereinafter Rodrigues) in view of Darty USPN 6,173,440.

Regarding claim 1, Rodrigues discloses a method of testing a program having statements, said method comprising the steps of:

- a) dividing said program into a plurality of groups such that every statement in the program belongs to at least one of the groups, (Rodrigues, 15; 54 – 65) and
- b) determining the ones of the program that are executed when said program is executed while testing said program (FIG.7, 706);
- c) indicating unexecuted groups, ones of the groups based on the ones of the groups that were determined in step b) to have been executed (13:28 - 35); and
- d) enabling said tester to execute said unexecuted groups such that said tester can ensure that all statements in said program are executed at least once (13:28 – 35, also FIG. 7, 704,706). Rodrigues doesn't explicitly disclose wherein each of said groups contains a respective sequence of ones of the statements such that all the statements of such a group are executed if at least one statement of said group is executed, wherein such a group is deemed to be executed if at least one of the

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statements of the group is executed when the program is executed. However, Darty does disclose this feature in an analogous prior art (Figure 3a, s102 – s108, also see Figure 3b, s122). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Rodrigues and Darty because, using a particular sequence of test instruction for a particular group would make testing the divisions more efficient and targeted.

Regarding claim 2, the method of claim 1, further comprising including an extra statement in each of said groups, wherein execution of such an extra statement enables said determining in step b) to identify an executed one of the groups corresponding to said extra statement (Rodrigues, 15:60 – 62).

Regarding claim 3, the method of claim 2, wherein said extra statements contains respective group identifiers, wherein said determining in step b) further comprises examining such a group identifier to determine a specific one of the groups which has been executed (Rodrigues, 15:60 – 62, also see 16:1 – 15).

Regarding claim 4, the method of claim 2, wherein said program is contained in a plurality of programs which in turn are contained in a class of an object oriented environment (Rodrigues, 16:17-20).

Regarding claim 5, the method of claim 4, further comprising the steps of: grouping a sequence of the groups into a block; and

determining that said block has been executed only if all of the groups of the block are executed (Rodrigues, 9:62 – 65).

Regarding claim 6, the method of claim 5, wherein said grouping comprises: determining a language structure present in said plurality of programs (Rodrigues, 18:12 - 14); grouping a subset of groups present in said language structure into a block such that the statements in said language structure are presented as a block to said tester (Rodrigues, 18:12 – 14).

Regarding claim 9, the method of claim 4, wherein said enabling comprises: enabling said tester to examine the statements associated with said unexecuted blocks such that said tester can determine arguments which would cause an unexecuted block to be executed; enabling said tester to enter said determined arguments to cause said

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unexecuted block to be executed (Rodrigues, 13:28 - 35, also FIG. 7, 704, 706, for arguments see "Y" and "N").

Regarding claim 10, the method of claim 9, wherein said argument comprises an instance of another object (Rodrigues FIG. 5, 502).

Regarding claim 11, the method of claim 10, further comprises: enabling said tester to instantiate said instance of said another object (Rodrigues, FIG. 5, 502); enabling said tester to assign a name to said instance, wherein said tester can enter said name to provide said instance as an argument value (Rodrigues, 13:13 - 15).

Regarding claim 12, the method of claim 11, further comprising:

receiving a string as an argument (Rodrigues, 13:13 - 15, see name); and determining that said string indicates that said instance is said argument value if said name matches said string (Rodrigues, 13:13 - 35).

Regarding claim 13, the method of claim 4, further comprising: enabling said tester to define a macro containing a plurality of program lines (Rodrigues, 20:33, for macro see script); storing said macro in a database (Rodrigues, 19:57 - 60); and enabling said tester to execute said macro in the middle of testing said plurality of programs (Rodrigues, 20:33, for macro see script).

Regarding claim 14, the method of claim 13, wherein said macro is designed to examine the data structures within an instance of an object or to set the values for the variables in the object (Rodrigues, FIG., 502).

Regarding claim 15, the method of claim 4, wherein said dividing, determining, indicating and enabling are performed in a single computer system (see abstract, for "computer operable method... within a computer application program....").

Regarding claim 16, Rodrigues discloses all the claimed limitations as applied in claim 4 above. Rodrigues doesn't explicitly disclose wherein said object is generated in Java Programming language. However, Darty does disclose this functionality in an analogous art (Rodrigues, 21:25 - 27). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Rodrigues and Darty because, implementing program in Java would give the program multi-platform compatibility.

Regarding claim 17, the method of claim 4, further comprising: enabling said tester to load said class; enabling said tester to instantiate an instance of said class (Rodrigues, FIG., 502); and enabling said tester to execute said program on said instance (Rodrigues, FIG., 504).

Regarding claim 18, (computer program product) see claim 1 for reasoning.

Regarding claim 19, (computer program product) see claim 2 for reasoning.

Regarding claim 20, (computer program product) see claim 3 for reasoning.

Regarding claim 21, (computer program product) see claim 4 for reasoning.

Regarding claim 22, (computer program product) see claim 5 for reasoning.

Regarding claim 23, (computer program product) see claim 6 for reasoning.

Regarding claim 25, computer program product of claim 21, wherein said enabling means comprises:

second enabling means for enabling said tester to examine the statements associated with said unexecuted blocks such that said tester can determine arguments which would cause an unexecuted block to be executed;

third enabling means for enabling said tester to enter said determined arguments to cause said unexecuted block to be executed (Rodrigues, 13:28 – 35, also FIG. 7, 704,706).

Regarding claim 26, (computer program product) see claim 11 for reasoning.

Regarding claim 27, (computer program product) see claim 12 for reasoning.

Regarding claim 28, (computer program product) see claim 14 for reasoning.

Regarding claim 29, (computer program product) see claim 13 for reasoning.

Regarding claim 30, (computer program product) see claim 17 for reasoning.

Regarding claim 31, (a system) see claim 1 for reasoning.

Regarding claim 32, (a system) see claim 2 for reasoning.

Regarding claim 33, (a system) see claim 3 for reasoning.

Regarding claim 34, (a system) see claim 4 for reasoning.

Regarding claim 35, (a system) see claim 5 for reasoning.

Regarding claim 36, (a system) see claim 5 for reasoning.

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Regarding claim 38, the system of claim 34, wherein said processor receives instructions from said input interface to display the statements associated with said unexecuted blocks, said processor causing the statements to be displayed on said display unit such that said tester can determine arguments which would cause an unexecuted block to be executed (Rodrigues, FIG.7, 704,706).

Regarding claim 39, the system of claim 38, wherein said argument comprises an instance of another object (Rodrigues, FIG.5, 502).

Regarding claim 40, (system) see reasoning in claim 11.

Regarding claim 41, (system) see reasoning in claim 12.

Regarding claim 42, (system) see reasoning in claim 13.

Regarding claim 43, (system) see reasoning in claim 14.

Regarding claim 44, the system of claim 34, wherein said processor loads said class into said RAM in response to receiving an instruction to load said class, said processor further instantiating an instance of said class in response to receiving another instruction, said processor executing said program on said instance in response to receiving one more instruction (Rodrigues, 15: 37 – 40).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7, 8, 24, 37 & 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rodrigues et al. USPN 6,067,639 (hereinafter Rodrigues) in view of

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Darty USPN 6,173,440, as applied in claim 6, in view of Uchihira et al. USPN 5,860,009 (hereinafter Uchihira).

Regarding claim 7, Rodrigues and Darty discloses all claimed limitations as applied in claim 6 above. The combination of Rodrigues and Darty doesn't explicitly disclose wherein said blocks are defined hierarchically according to the inclusive relationship of language structures in said plurality of programs. However, Uchihira does disclose this feature in a similar configuration (25:55 – 60). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Rodrigues as modified by Darty and Uchihira because, defining instructions hierarchically by different levels enables more efficient prioritization.

Regarding claim 8, the method of claim 7, wherein said language structure comprises one of program delimiters, control structure and loop structure (Rodrigues, 13:5-6).

Regarding claim 24, (computer program product) see claim 7 for reasoning.

Regarding claim 37, (system) see claim 7 for reasoning.

Regarding claim 45, the system of claim 31, wherein said input interface is connected to at least one of a mouse and a key-board (Darty, 4: 10 – 15, also see Uchihira, 12:11, note key-board and mouse devices are well known devices for use on computer system).

Response to Arguments

7. Applicant's arguments with respect to claims 1 - 45 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence Information

9. Any inquires concerning this communication or earlier communications from the examiner should be directed to Chuck O. Kendall who may be reached via telephone at (703) 308-6608. The examiner can normally be reached Monday through Friday between 8:00 A.M. and 5:00 P.M. est.

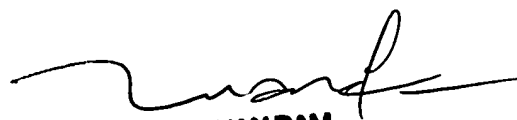
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam *can be reached at (703) 305-4552.*

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

For facsimile (fax) send to central FAX number 703-872-9306 and 703-7467240 draft.

Chuck O. Kendall

Software Engineer Patent Examiner


TUAN DAM
SUPERVISORY PATENT EXAMINER